

MONTHLY NOTICES
OF THE
ROYAL ASTRONOMICAL SOCIETY

CONTAINING
PAPERS PUBLISHED IN THE PERIOD
1978 JULY TO SEPTEMBER

VOL. 184

EDITORIAL BOARD

DR D. H. P. JONES, ROYAL GREENWICH OBSERVATORY
DR C. JORDAN, DEPARTMENT OF THEORETICAL PHYSICS, OXFORD
DR M. S. LONGAIR, CAVENDISH LABORATORY, CAMBRIDGE
PROFESSOR B. E. J. PAGEL, ROYAL GREENWICH OBSERVATORY
DR J. R. SHAKESHAFT, MULLARD RADIO ASTRONOMY OBSERVATORY, CAMBRIDGE
PROFESSOR R. J. TAYLER, UNIVERSITY OF SUSSEX ASTRONOMY CENTRE

Published for the Royal Astronomical Society by
Blackwell Scientific Publications
Oxford London Edinburgh Melbourne

AUTHOR INDEX

PAGE

ABRAMENKO A.N., GERSHBERG R.E., PAVLENKO E.P., PROKOF'EVA, V.V., LEWIN W.H.G., VAN PARADIJS J.A., HOFFMAN J.A., LI F.K. Optical monitoring of X-ray burst sources.....	27P
ALLADIN SALEH MOHAMED, PARTHASARATHY M. Tidal disruption and tidal coalescence in binary stellar systems.....	871
ALLEN C.J. see ALLEN D.A.	
ALLEN D.A., LONGMORE A.J., HAWARDEN T.G., CANNON R.D., ALLEN C.J. Compact galaxies on UK Schmidt plates.....	303
ALLEN DAVID A. Classification spectra of Sanduleak and Stephenson emission-line stars.....	601
ALLEN DAVID A. see WRIGHT ALAN E.	
ALLSOPP N.J. A neutral-hydrogen survey of the dwarf irregular galaxy Leo A.....	397
ANILE A.M., MOTTA S. Long-wavelength gravitational waves and the fine-scale anisotropy of the cosmic microwave background.....	319
ANTIA H.M., CHITRE S.M. Invalidity of the linearized theory for a complete polytrope.....	211
AUSTIN R.R.D. see MCINALLY C.J.	
BAIERLEIN RALPH The amplification of magnetic fields during the radiation era.....	843
BALONA L.A., MARTIN W.L. RS Gruis: a dwarf cepheid in a binary system.....	1
BALONA L.A., MARTIN W.L. The radius of the dwarf cepheid ZZ Mic.....	31
BARROW JOHN D. A cosmological limit on the possible variation of G.....	677
BATCHELOR R.A. see KNOWLES S.H.	
BATESON FRANK M. The southern dwarf nova, Z Chamaeleontis.	567
BECKLIN E.E. see WERNER M.W.	
BECKLIN E.E. see NADEAU D.	
BEGELMAN MITCHELL C. Black holes in radiation-dominated gas: an analogue of the Bondi accretion problem.....	53
BELL-BURNELL S.J. see COE M.J.	
BHATIA A.K. see MASON H.E.	
BIEMONT EMILE Abundances of singly-ionized elements of the iron group in the Sun.....	683
BIRKINSHAW M. A survey of rich clusters of galaxies at 408 and 1407 MHz.....	387
BOKSENBERG A., CARSWELL R.F., SMITH MALCOLM G., WHELAN J.A.J. The absorption-line spectrum of Q 3246-057.....	773
BRIDLE A.H. see GUINDON B.	
BRINDLE C., FRENCH D.K., OSBORNE J.L. An interpretation of the galactic continuum radiation - II. A three-dimensional model of the radio emissivity.....	283
BROOKES J.R., ISAAK G.R., MCLEOD C.P., VAN DER RAAY H.B., ROCA CORTES T. The search for solar oscillations, 1974 to 1976.....	759

CANNON R.D.	
see ALLEN D.A.	
CANUTO V.	On the origin of Hawking mini black-holes and the cold early Universe..... 721
CAPUTO F., CASTELLANI V., WOOD P.L.R.	Evolutionary parameters in observed horizontal and asymptotic branches.. 377
CARNOCHAN D.J.	
see NANDY K.	
CARNOCHAN D.J.	
see NANDY K.	
CARPENTER G.F.	
see WHITE N.E.	
CARPENTER G.F.	
see COE M.J.	
CARSWELL R.F.	
see BOKSENBERG A.	
CASTELLANI V.	
see CAPUTO F.	
CHAISSON ERIC J.	
see RODRIGUEZ LUIS F.	
CHITRE S.M.	
see ANTIA H.M.	
CLEGG R.E.S.	
see WYCKOFF S.	
CLUBE S.V.M.	M stars in the north galactic polar region... 553
COE M.J., ENGEL A.R., QUENBY J.J., CARPENTER G.F., BELL-BURNELL S.J., DAVISON P.J.N.	The X-ray source Serpens X-1: Ariel V observations and discussion of models for the spectrum and time variability..... 355
COHEN MARTIN	The fading of an extremely young T Tauri star and its associated nebula..... 695
COHEN MARTIN, LEWIS ROBERT R.	Optical studies of embedded infrared sources..... 801
COLEMAN G.D.	
see WORDEN S.P.	
COTTRELL G.A.	On the origin of Irregular II galaxies..... 259
COULSON I.M., MURDIN P.G., MACGILLIVRAY H.T., ZEALEY W.J.	Absorption in and around the H II region Lambda Orionis.... 171
CULHANE J.L.	
see STARK J.P.W.	
DANZIGER I.J.	
see MANCHESTER R.N.	
DANZIGER I.J., GOSS W.M., FRATER R.H.	The giant radio galaxies PKS 0211-47 and PKS 0634-20..... 341
DANZIGER I.J.	
see SMITH F.G.	
DAVISON P.J.N.	
see COE M.J.	
DISNEY M.J.	
see MANCHESTER R.N.	
DISNEY M.J.	
see SMITH F.G.	
DOROSHKVICH A.G., SHANDARIN S.F., SAAR E.	Spatial structure of protoclusters and formation of galaxies..... 643
EDMUNDS M.G.	
see PAGEL B.E.J.	
ELIAS J.	
see NADEAU D.	
ELLIOTT K.H., MEABURN J., TERRETT D.L.	The many, large-scale, velocity components of M17 - observed with an insect-eye Fabry-Perot..... 527

ELLIS G.F.R., MARTENS R., NEL S.D. The expansion of the Universe.....	439
ELLIS M.J. see WERNER M.W.	
ENGEL A.R. see COE M.J.	
ENNIS D. see NADEAU D.	
ERSHKOVICH ALEXANDER I. The comet tail magnetic field: large or small?.....	755
EVANS T.LLOYD The open cluster NGC 6383.....	661
FABIAN A.C., LIN D.N.C., PAPALOIZOU J., PRINGLE J.E., WHELAN J.A.J. The determination of the orbital parameters of WZ Sagittae.....	835
FOSBURY R.A.E. see PAGEL B.E.J.	
FRANK JUHAN Tidal disruption by a massive black hole and collisions in galactic nuclei.....	87
FRATER R.H. see DANZIGER I.J.	
FRENCH D.K. see BRINDLE C.	
GALLOWAY D.J. The origin of running penumbral waves.....	49P
GARDNER F.F. see WHITEOAK J.B.	
GATLEY I. see WERNER M.W.	
GERSHBERG R.E. see ABRAMENKO A.N.	
GIETZEL P.C. see O'MARA B.J.	
GINGOLD R.A., MONAGHAN J.J. Binary fission in damped rotating polytropes.....	481
GLASS I.S. see MARTIN W.L.	
GOSS W.M. see MANCHESTER R.N.	
GOSS W.M. see MANCHESTER R.N.	
GOSS W.M. see DANZIGER I.J.	
GOSS W.M. see SMITH F.G.	
GUINDON B., BRIDLE A.H. Morphology and peculiar velocities of radio sources in rich clusters of galaxies...	221
GUNN J.E. see LAING R.A.	
GUTHRIE B.N.G. Optical properties of radio and cD galaxies	611
HAMILTON P.A. see MANCHESTER R.N.	
HARTLEY K.F. see MANCHESTER R.N.	
HARTLEY K.F. see SMITH F.G.	
HAWARDEN T.G. see ALLEN D.A.	
HECK A., LAKAYE J.M. A note on the relation between metallicity and luminosity in field RRab Lyrae stars.....	17

HOFFMAN J.A.	
see ABRAMENKO A.N.	
HYLAND A.R.	
see WERNER M.W.	
ISAAK G.R.	
see BROOKES J.R.	
JAMESON R.F.	
see WATSON M.G.	
JOHANSSON SVENERIC	Absorption lines in ν Sgr identified as
high-level transitions of Fe II.....	593
JOHNSON P.G.	Extensive nebulosity and the giant radio
loops.....	727
JONES BERNARD J.T.	
see JONES JANET E.	
JONES D.H.P.	
see MANCHESTER R.N.	
JONES D.H.P.	
see SMITH F.G.	
JONES JANET E., JONES BERNARD J.T.	An observational test
of the luminosity function of galaxies.....	327
JONES P.B.	Particle acceleration at the magnetic poles of
a neutron star.....	807
JOSHI U.C.	
see SAGAR RAM	
KATZ J., LYNDEN-BELL D.	The gravothermal instability in
two dimensions.....	709
KIBBLEWHITE E.J.	
see LAING R.A.	
KING D.J.	
see SMITH F.G.	
KNOWLES S.H., BATCHELOR R.A.	Linear polarisation of
22-GHz water-vapour line emission in southern sources.....	107
KOORNNEEF JAN	The infrared angular diameter of η Carinae..
	477
LAING R.A., LONGAIR M.S., RILEY J.M., KIBBLEWHITE E.J.,	
GUNN J.E.	Source counts and V/V_{\max} tests for a complete
sample of 3CR radio sources studied to very faint limiting	
magnitudes.....	149
LAKAYE J.M.	
see HECK A.	
LAMBERT DAVID L., LUCK R. EARLE	Spectrum variations of
the superluminous star HR 8752.....	405
LARSON RICHARD B.	Calculations of three-dimensional
collapse and fragmentation.....	69
LEE PAUL	
see MENDEZ ROBERTO H.	
LEWIN W.H.G.	
see ABRAMENKO A.N.	
LEWIS ROBERT R.	
see COHEN MARTIN	
LI F.K.	
see ABRAMENKO A.N.	
LIN D.N.C.	
see FABIAN A.C.	
LONGAIR M.S.	
see LAING R.A.	
LONGMORE A.J.	
see ALLEN D.A.	

LUCK R. EARLE	
see LAMBERT DAVID L.	
LYNDEN-BELL D.	
see KATZ J.	
LYNE A.G.	
see MANCHESTER R.N.	
LYNE A.G.	
see SMITH F.G.	
MACGILLIVRAY H.T.	
see COULSON I.M.	
MALLIA E.A., PAGEL B.E.J. Further evidence of mass loss from globular cluster stars.....	55P
MANCHESTER R.N., LYNE A.G., GOSS W.M., SMITH F.G., DISNEY M.J., HARTLEY K.F., JONES D.H.P., WELLGATE G.B., DANZIGER I.J., MURDIN P.G., PETERSON BRUCE A., WALLACE P.T.	
Optical observations of southern pulsars.....	159
MANCHESTER R.N., NEWTON LYNETTE M., GOSS W.M., HAMILTON P.A.	
Detection of a large period discontinuity in the longer period pulsar PSR 1641-45.....	35P
MANCHESTER R.N.	
see SMITH F.G.	
MARKELLOS V.V. Asymmetric periodic orbits in three dimensions.....	273
MARTENS R.	
see ELLIS G.F.R.	
MARTIN W.L.	
see BALONA L.A.	
MARTIN W.L.	
see BALONA L.A.	
MARTIN W.L., PENFOLD J.E., GLASS I.S. Spectroscopic and photometric observations of three compact galaxies.....	15P
MASON H.E., BHATIA A.K. Theoretical intensity ratios for the UV lines of Mg VII, Si IX and S XI.....	423
MASON K.O.	
see WHITE N.E.	
MASON K.O., MURDIN P.G., PARKES G.E., VISVANATHAN N. The optical counterpart of GX304-1.....	45P
MASON K.O.	
see WHITE N.E.	
MASON K.O.	
see PARKES G.E.	
MATTHEWS K.	
see NADEAU D.	
MCHARDY IAN X-ray sources in clusters of galaxies.....	783
MCINALLY C.J., AUSTIN R.R.D. A survey for southern Scuti variable stars.....	885
MCLEOD C.P.	
see BROOKES J.R.	
MEABURN J.	
see ELLIOTT K.H.	
MENDEZ ROBERTO H., NIEMELA VIRPI S., LEE PAUL A-type central stars of planetary nebulae - I. A radial-velocity study of the central stars of NGC 2346 and NGC 3132.....	351
MOHANTY D.K.	
see SARMA N.V.G.	
MONAGHAN J.J. Fluctuating hydrodynamics and the thermodynamics of self-gravitating systems.....	25

MONAGHAN J.J.	
see NASH P.E.	
MONAGHAN J.J.	
see GINGOLD R.A.	
MORGAN D.H.	
see NANDY K.	
MORTON DONALD C.	The unidentified interstellar lines in
zeta Ophiuchi.....	713
MOSS DAVID	Large-scale magnetic fields, g- modes and
convection in stars.....	621
MOTTA S.	
see ANILE A.M.	
MURDIN P.G.	
see MANCHESTER R.N.	
MURDIN P.G.	
see COULSON I.M.	
MURDIN P.G.	
see SMITH F.G.	
MURDIN P.G.	
see MASON K.O.	
MURDIN P.G.	
see PARKES G.E.	
NADEAU D., NEUGEBAUER G., BECKLIN E.E., ELIAS J., ENNIS D.,	
MATTHEWS K., SELLGREN K.	The light curve at 10 μ m of
Algol near secondary minimum.....	523
NANDY K., MORGAN D.H., CARNOCHAN D.J.	Observations of the
Small Magellanic Cloud with the Ultraviolet Sky Survey	
Telescope.....	631
NANDY K., THOMPSON G.I., CARNOCHAN D.J., WILSON R.	
Observations of interstellar ultraviolet extinction from	
the S2/68 experiment in the TD-1 satellite.....	733
NASH P.E., MONAGHAN J.J.	A statistical theory of the
disruption of three-body systems - III. Three-dimensional	
motion.....	119
NEL S.D.	
see ELLIS G.F.R.	
NETZER HAGAI, YAHIL A., YANIV R.	The Hubble diagram for
QSOs.....	21P
NEUGEBAUER G.	
see NADEAU D.	
NEWTON LYNETTE M.	
see MANCHESTER R.N.	
NIEMELA VIRPI S.	
see MENDEZ ROBERTO H.	
O'MARA, BGIETZEL P.C.	The use of multipole expansions in
spectral line-broadening theory.....	205
OSBORNE J.L.	
see BRINDLE C.	
PAGEL B.E.J., EDMUNDS M.G., FOSBURY R.A.E., WEBSTER B.L.	
A survey of chemical compositions of H II regions in the	
Magellanic Clouds.....	569
PAGEL B.E.J.	
see MALLIA E.A.	
PAPALOIZOU J., PRINGLE J.E.	Gravitational radiation and
the stability of rotating stars.....	501
PAPALOIZOU J.	
see FABIAN A.C.	
PARKES G.E.	
see MASON K.O.	
PARKES G.E., MURDIN P.G., MASON K.O.	The optical
counterpart of the binary X-ray pulsar 4U 1538-52.....	73P

PARTHASARATHY M.	
see ALLADIN SALEH MOHAMED	
PAVLENKO E.P.	
see ABRAMENKO A.N.	
PENFOLD J.E.	
see MARTIN W.L.	
PETERSON B.A.	
see SMITH F.G.	
PETERSON BRUCE A.	
see MANCHESTER R.N.	
PIKE C.D. Radial-velocity variations of α Equulei and HR 6684 deduced from PPS scans.....	265
POOLEY G.G.	
see RILEY J.M.	
PRINGLE J.E.	
see PAPALOIZOU J.	
PRINGLE J.E.	
see FABIAN A.C.	
PROKOF'EVA V.V.	
see ABRAMENKO A.N.	
QUENBY J.J.	
see COE M.J.	
RAJAMOHAN R. Stellar rotation on the zero age main sequence.....	743
REES M.J. The M87 jet: internal shocks in a plasma beam?..	61P
RILEY J.M.	
see LAING R.A.	
RILEY J.M., POOLEY G.G. 15-GHz observations of the quasars 3C 270.1 and 3C 275.1.....	769
ROBINSON G.	
see WERNER M.W.	
ROCA CORTES T.	
see BROOKES J.R.	
RODRIGUEZ LUIS F., CHAISSON ERIC J. Broad-line H94 α emission from the extended thermal component in the Galactic Centre.....	145
RUCINSKI S.M.	
see WORDEN S.P.	
SAAR E.	
see DOROSHKEVICH A.G.	
SAGAR RAM, JOSHI U.C. Study of the extremely young open cluster NGC 6530.....	467
SANFORD P.W.	
see WHITE N.E.	
SARMA N.V.G., MOHANTY D.K. Search for the deuterium absorption line at 327 MHz in the direction of the Galactic Centre.....	181
SCALES B.G.F. Results of the Herstmonceux parallax programme - II.....	101
SELLGREN K.	
see NADEAU D.	
SHANDARIN S.F.	
see DOROSHKEVICH A.G.	
SHERRENGTON M.R.	
see WATSON M.G.	
SHOBBROOK R.R. The evolutionary state of the Beta Canis Majoris variables - I. Accurate beta photometry of early B stars.....	43

SHOBBROOK R.R.	The evolutionary state of the β Canis Majoris variables - II. The luminosity calibration and evolutionary state.....	825
SIMON ANN J.B.	Radio sources with complex morphologies in clusters of galaxies.....	537
SINCLAIR M.W.		
	see WHITEOAK J.B.	
SKINNER G.K.		
	see WHITE N.E.	
SMITH F.G.		
	see MANCHESTER R.N.	
SMITH F.G., DISNEY M.J., HARTLEY K.F., JONES D.H.P., KING D.J., WELLGATE G.B., MANCHESTER R.N., LYNE A.G., GOSS W.M., WALLACE P.T., PETERSON B.A., MURDIN P.G., DANZIGER I.J.	Resolution of the peak of the Crab Pulsar optical pulse....	39P
SMITH MALCOLM G.		
	see BOKSENBERG A.	
STARK J.P.W., CULHANE J.L.	A search for X-ray line emission in the spectrum of the Cygnus Loop.....	509
TERRETT D.L.		
	see ELLIOTT K.H.	
THACKERAY A.D.	Additional radial velocities of supergiants in the Small Magellanic Cloud.....	699
THOMAS J.A.		
	see WERNER M.W.	
THOMPSON G.I.		
	see NANDY K.	
UPHAM RAYMOND J. JR.		
	see WEISHEIT JON C.	
VAN DER RAAY H.B.		
	see BROOKES J.R.	
VAN PARADIJS J.A.		
	see ABRAMENKO A.N.	
VISVANATHAN N.		
	see MASON K.O.	
WALLACE P.T.		
	see MANCHESTER R.N.	
WALLACE P.T.		
	see SMITH F.G.	
WATSON M.G., SHERRINGTON M.R., JAMESON R.F.	Hard X-ray emission from dwarf novae.....	79P
WEBSTER B.L.		
	see PAGEL B.E.J.	
WEEDMAN DANIEL W.	More Seyfert galaxies.....	11P
WEHINGER P.A., WYCKOFF S.	Resolved structure associated with the quasar PKS 0837-12.....	335
WEISHEIT JON C., UPHAM RAYMOND J. JR.	Electron transfer in ion-dust grain collisions.....	227
WELLGATE G.B.		
	see MANCHESTER R.N.	
WELLGATE G.B.		
	see SMITH F.G.	
WERNER M.W., BECKLIN E.E., GATLEY I., ELLIS M.J., HYLAND A.R., ROBINSON G., THOMAS J.A.	Far-infrared observations of large Magellanic Cloud H II regions.....	365
WHELAN J.A.J.		
	see WORDEN S.P.	
WHELAN J.A.J.		
	see BOKSENBERG A.	

WHELAN J.A.J.
 see FABIAN A.C.
 WHITE N.E., MASON K.O., CARPENTER G.F., SKINNER G.K. The
 variability of MXB 1730-335..... 1P
 WHITE N.E., MASON K.O., SANFORD P.W. The binary X-ray
 pulsar 3U 1223-62..... 67P
 WHITE SIMON D.M. Simulations of merging galaxies..... 185
 WHITEOAK J.B., GARDNER F.F., SINCLAIR M.W. Observations
 of the 3.3-GHz ground-state transitions of interstellar CH. 235
 WILLS D. Improved optical positions of objects associated
 with extended radio sources..... 559
 WILSON R.
 see NANCY K.
 WOOD P.L.R.
 see CAPUTO F.
 WOOLLEY SIR RICHARD The velocity ellipsoid of RR Lyrae
 variable stars..... 311
 WORDEN S.P., COLEMAN G.D., RUCINSKI S.M., WHELAN J.A.J. A
 study of the contact binary system ER Cephei..... 33
 WRIGHT ALAN E., ALLEN DAVID A. Radio observations of
 symbiotic stars..... 893
 WYCKOFF S., CLEGG R.E.S. Molecular spectra of pure S stars 127
 WYCKOFF S.
 see WEHINGER P.A.
 YAHIL A.
 see NETZER HAGAI
 YANIV R.
 see NETZER HAGAI
 ZEALEY W.J.
 see COULSON I.M.

SUBJECT INDEX

PAGE

ABUNDANCES OF THE ELEMENTS

- A survey of chemical compositions of H II regions in the
Magellanic Clouds, PAGEL B.E.J., EDMUNDS M.G., FOSBURY
R.A.E., WEBSTER B.L..... 569

ACCRETION AND ACCRETION DISKS

- Black holes in radiation-dominated gas: an analogue of the
Bondi accretion problem, BEGELMAN MITCHELL C..... 53

ASTROMETRY

- Results of the Herstmonceux parallax programme - II, SCALES
B.G.F..... 101

BLACK HOLES

- Black holes in radiation-dominated gas: an analogue of the
Bondi accretion problem, BEGELMAN MITCHELL C..... 53
Tidal disruption by a massive black hole and collisions in
galactic nuclei, FRANK JUHAN..... 87

CELESTIAL MECHANICS

- Fluctuating hydrodynamics and the thermodynamics of
self-gravitating systems, MONAGHAN J.J..... 25
Calculations of three-dimensional collapse and fragmentation
LARSON RICHARD B..... 69
Tidal disruption by a massive black hole and collisions in
galactic nuclei, FRANK JUHAN..... 87
A statistical theory of the disruption of three-body
systems - III. Three-dimensional motion, NASH P.E.,
MONAGHAN J.J..... 119
Simulations of merging galaxies, WHITE SIMON D.M..... 185
Asymmetric periodic orbits in three dimensions, MARKELLOS
V.V..... 273
Binary fission in damped rotating polytropes, GINGOLD R.A.,
MONAGHAN J.J..... 481

COMETS

- The comet tail magnetic field: large or small?, ERSHKOVICH
ALEXANDER I..... 755

COSMIC RAYS

- An interpretation of the galactic continuum radiation - II.
A three-dimensional model of the radio emissivity, BRINDLE
C., FRENCH D.K., OSBORNE J.L..... 283

COSMOLOGY

- Source counts and V/Vmax tests for a complete sample of 3CR
radio sources studied to very faint limiting magnitudes,
LAING R.A., LONGAIR M.S., RILEY J.M., KIBBLEWHITE E.J.,
GUNN J.E..... 149
The Hubble diagram for QSOs, NETZER HAGAI, YAHIL A., YANIV
R..... 21P
Long-wavelength gravitational waves and the fine-scale
anisotropy of the cosmic microwave background, ANILE A.M.,
MOTTA S..... 319
The expansion of the Universe, ELLIS G.F.R., MARTENS R.,
NEL S.D..... 439

Spatial structure of protoclusters and formation of galaxies DOROSHKEVICH A.G., SHANDARIN S.F., SAAR E.....	643
A cosmological limit on the possible variation of G, BARROW JOHN D.....	677
On the origin of Hawking mini black-holes and the cold early Universe, CANUTO V.....	721
The amplification of magnetic fields during the radiation era, BAIERLEIN RALPH.....	843
GALACTIC CENTRE	
Broad-line H94 α emission from the extended thermal component in the Galactic Centre, RODRIGUEZ LUIS F., CHAISSON ERIC J.....	145
Search for the deuterium absorption line at 327 MHz in the direction of the Galactic Centre, SARMA N.V.G., MOHANTY D.K.....	181
GALACTIC STRUCTURE AND STELLAR DYNAMICS	
An interpretation of the galactic continuum radiation - II. A three-dimensional model of the radio emissivity, BRINDLE C., FRENCH D.K., OSBORNE J.L.....	283
M stars in the north galactic polar region, CLUBE S.V.M.....	553
GALAXIES	
Tidal disruption by a massive black hole and collisions in galactic nuclei, FRANK JUHAN.....	87
Simulations of merging galaxies, WHITE SIMON D.M.....	185
On the origin of Irregular II galaxies, COTTRELL G.A.....	259
More Seyfert galaxies, WEEDMAN DANIEL W.....	11P
Spectroscopic and photometric observations of three compact galaxies, MARTIN W.L., PENFOLD J.E., GLASS I.S.....	15P
Compact galaxies on UK Schmidt plates, ALLEN D.A., LONGMORE A.J., HAWARDEN T.G., CANNON R.D., ALLEN C.J.....	303
An observational test of the luminosity function of galaxies JONES JANET E., JONES BERNARD J.T.....	327
The giant radio galaxies PKS 0211-47 and PKS 0634-20, DANZIGER I.J., GOSS W.M., FRATER R.H.....	341
A neutral-hydrogen survey of the dwarf irregular galaxy Leo A, ALLSOPP N.J.....	397
Improved optical positions of objects associated with extended radio sources, WILLS D.....	559
Optical properties of radio and cD galaxies, GUTHRIE B.N.G..	611
Spatial structure of protoclusters and formation of galaxies DOROSHKEVICH A.G., SHANDARIN S.F., SAAR E.....	643
Erratum.....	903
The M87 jet: internal shocks in a plasma beam?, REES M.J....	61P
GALAXY CLUSTERS	
Morphology and peculiar velocities of radio sources in rich clusters of galaxies, GUINDON B., BRIDLE A.H.....	221
A survey of rich clusters of galaxies at 408 and 1407 MHz, BIRKINSHAW M.....	387
Radio sources with complex morphologies in clusters of galaxies, SIMON ANN J.B.....	537
Erratum.....	599
Spatial structure of protoclusters and formation of galaxies DOROSHKEVICH A.G., SHANDARIN S.F., SAAR E.....	643
X-ray sources in clusters of galaxies, MCHARDY IAN.....	783

GRAVITATIONAL RADIATION

Long-wavelength gravitational waves and the fine-scale anisotropy of the cosmic microwave background, ANILE A.M., MOTTA S.....	319
Gravitational radiation and the stability of rotating stars, PAPALOIZOU J., PRINGLE J.E.....	501

INFRARED ASTRONOMY

Far-infrared observations of large Magellanic Cloud H II regions, WERNER M.W., BECKLIN E.E., GATLEY I., ELLIS M.J., HYLAND A.R., ROBINSON G., THOMAS J.A.....	365
The infrared angular diameter of η Carinae, KOORNNEEF JAN...	477
The light curve at 10 μ m of Algol near secondary minimum, NADEAU D., NEUGEBAUER G., BECKLIN E.E., ELIAS J., ENNIS D., MATTHEWS K., SELLGREN K.....	523
Optical studies of embedded infrared sources, COHEN MARTIN, LEWIS ROBERT R.....	801

INTERSTELLAR MEDIUM

Absorption in and around the H II region Lambda Orionis, COULSON I.M., MURDIN P.G., MACGILLIVRAY H.T., ZEALEY W.J....	171
Electron transfer in ion-dust grain collisions, WEISHEIT JON C., UPHAM RAYMOND J. JR.....	227
Observations of the 3.3-GHz ground-state transitions of interstellar CH, WHITEOAK J.B., GARDNER F.F., SINCLAIR M.W.	235
The unidentified interstellar lines in zeta Ophiuchi, MORTON DONALD C.....	713
Extensive nebulosity and the giant radio loops, JOHNSON P.G.	727
Observations of interstellar ultraviolet extinction from the S2/68 experiment in the TD-1 satellite, NANDY K., THOMPSON G.I., CARNOCHAN D.J., WILSON R.....	733

MAGELLANIC CLOUDS

Far-infrared observations of large Magellanic Cloud H II regions, WERNER M.W., BECKLIN E.E., GATLEY I., ELLIS M.J., HYLAND A.R., ROBINSON G., THOMAS J.A.....	365
A survey of chemical compositions of H II regions in the Magellanic Clouds, PAGEL B.E.J., EDMUNDS M.G., FOSBURY R.A.E., WEBSTER B.L.....	569
Observations of the Small Magellanic Cloud with the Ultraviolet Sky Survey Telescope, NANDY K., MORGAN D.H., CARNOCHAN D.J.....	631
Additional radial velocities of supergiants in the Small Magellanic Cloud, THACKERAY A.D.....	699

NEBULAE - GASEOUS

Linear polarisation of 22-GHz water-vapour line emission in southern sources, KNOWLES S.H., BATCHELOR R.A.....	107
Absorption in and around the H II region Lambda Orionis, COULSON I.M., MURDIN P.G., MACGILLIVRAY H.T., ZEALEY W.J....	171
Far-infrared observations of large Magellanic Cloud H II regions, WERNER M.W., BECKLIN E.E., GATLEY I., ELLIS M.J., HYLAND A.R., ROBINSON G., THOMAS J.A.....	365
The many, large-scale, velocity components of M17 - observed with an insect-eye Fabry-Perot, ELLIOTT K.H., MEABURN J., TERRETT D.L.....	527
A survey of chemical compositions of H II regions in the Magellanic Clouds, PAGEL B.E.J., EDMUNDS M.G., FOSBURY R.A.E., WEBSTER B.L.....	569

Extensive nebulosity and the giant radio loops, JOHNSON P.G.	727
Optical studies of embedded infrared sources, COHEN MARTIN, LEWIS ROBERT R.....	801
NEBULAE - PLANETARY	
A-type central stars of planetary nebulae - I. A radial-velocity study of the central stars of NGC 2346 and NGC 3132, MENDEZ ROBERTO H., NIEMELA VIRPI S., LEE PAUL....	351
NEUTRON STARS	
Particle acceleration at the magnetic poles of a neutron star, JONES P.B.....	807
PHYSICAL PROCESSES	
Fluctuating hydrodynamics and the thermodynamics of self-gravitating systems, MONAGHAN J.J.....	25
Calculations of three-dimensional collapse and fragmentation LARSON RICHARD B.....	69
Invalidity of the linearized theory for a complete polytrope ANTIA H.M., CHITRE S.M.....	211
Electron transfer in ion-dust grain collisions, WEISHEIT JON C., UPHAM RAYMOND J. JR.....	227
The X-ray source Serpens X-1: Ariel V observations and discussion of models for the spectrum and time variability, COE M.J., ENGEL A.R., QUENBY J.J., CARPENTER G.F., BELL-BURNELL S.J., DAVISON P.J.N.....	355
The origin of running penumbral waves, GALLOWAY D.J.....	49P
Large-scale magnetic fields, g- modes and convection in stars, MOSS DAVID.....	621
The gravothermal instability in two dimensions, KATZ J., LYNDEN-BELL D.....	709
Particle acceleration at the magnetic poles of a neutron star, JONES P.B.....	807
The amplification of magnetic fields during the radiation era, BAIERLEIN RALPH.....	843
Tidal disruption and tidal coalescence in binary stellar systems, ALLADIN SALEH MOHAMED, PARTHASARATHY M.....	871
The M87 jet: internal shocks in a plasma beam?, REES M.J....	61P
PULSARS	
Optical observations of southern pulsars, MANCHESTER R.N., LYNE A.G., GOSS W.M., SMITH F.G., DISNEY M.J., HARTLEY K.F., JONES D.H.P., WELLGATE G.B., DANZIGER I.J., MURDIN P.G., PETERSON BRUCE A., WALLACE P.T.....	159
Detection of a large period discontinuity in the longer period pulsar PSR 1641-45, MANCHESTER R.N., NEWTON LYNETTE M., GOSS W.M., HAMILTON P.A.....	35P
Resolution of the peak of the Crab Pulsar optical pulse, SMITH F.G., DISNEY M.J., HARTLEY K.F., JONES D.H.P., KING D.J., WELLGATE G.B., MANCHESTER R.N., LYNE A.G., GOSS W.M., WALLACE P.T., PETERSON B.A., MURDIN P.G., DANZIGER I.J....	39P
Particle acceleration at the magnetic poles of a neutron star, JONES P.B.....	807
The binary X-ray pulsar 3U 1223-62, WHITE N.E., MASON K.O., SANFORD P.W.....	67P
The optical counterpart of the binary X-ray pulsar 4U 1538-52, PARKES G.E., MURDIN P.G., MASON K.O.....	73P

QUASARS

The Hubble diagram for QSOs, NETZER HAGAI, YAHIL A., YANIV R.....	21P
Resolved structure associated with the quasar PKS 0837-12, WEHINGER P.A., WYCKOFF S.....	335
Improved optical positions of objects associated with extended radio sources, WILLS D.....	559
15-GHz observations of the quasars 3C 270.1 and 3C 275.1, RILEY J.M., POOLEY G.G.....	769
The absorption-line spectrum of Q 1246-057, BOKSENBURG A., CARSWELL R.F., SMITH MALCOLM G., WHELAN J.A.J.....	773

RADIO ASTRONOMY

Linear polarisation of 22-GHz water-vapour line emission in southern sources, KNOWLES S.H., BATCHELOR R.A.....	107
Broad-line H94 emission from the extended thermal component in the Galactic Centre, RODRIGUEZ LUIS F., CHAISSON ERIC J.	145
Source counts and V/Vmax tests for a complete sample of 3CR radio sources studied to very faint limiting magnitudes, LAING R.A., LONGAIR M.S., RILEY J.M., KIBBLEWHITE E.J., GUNN J.E.....	149
Search for the deuterium absorption line at 327 MHz in the direction of the Galactic Centre, SARMA N.V.G., MOHANTY D.K.....	181
Morphology and peculiar velocities of radio sources in rich clusters of galaxies, GUINDON B., BPIDLE A.H.....	221
Observations of the 3.3-GHz ground-state transitions of interstellar CH, WHITEOAK J.B., GARDNER F.F., SINCLAIR M.W.	235
AN interpretation of the galactic continuum radiation - II. A three-dimensional model of the radio emissivity, BRINDLE C., FRENCH D.K., OSBORNE J.L.....	283
Long-wavelength gravitational waves and the fine-scale anisotropy of the cosmic microwave background, ANILE A.M., MOTTA S.....	319
The giant radio galaxies PKS 0211-47 and PKS 0634-20, DANZIGER I.J., GOSS W.M., FRATER R.H.....	341
A survey of rich clusters of galaxies at 408 and 1407 MHz, BIRKINSHAW M.....	387
A neutral-hydrogen survey of the dwarf irregular galaxy Leo A, ALLSOPP N.J.....	397
Radio sources with complex morphologies in clusters of galaxies, SIMON ANN J.B.....	537
Improved optical positions of objects associated with extended radio sources, WILLS D.....	559
Optical properties of radio and cD galaxies, GUTHRIE B.N.G..	611
Extensive nebulosity and the giant radio loops, JOHNSON P.G.	727
15-GHz observations of the quasars 3C 270.1 and 3C 275.1, RILEY J.M., POOLEY G.G.....	769
Radio observations of symbiotic stars, WRIGHT ALAN E., ALLEN DAVID A.....	893

RELATIVITY

On the origin of Hawking mini black-holes and the cold early Universe, CANUTO V.....	721
--------------------------------------------------------------------------------------	-----

SPECTROSCOPY

The use of multipole expansions in spectral line-broadening theory, O'MARA B.J., GIETZEL P.C.....	205
---------------------------------------------------------------------------------------------------	-----

Theoretical intensity ratios for the UV lines of Mg VII, Si IX and S XI, MASON H.E., BHATIA A.K.....	423
STARS - ATMOSPHERES OF	
The origin of running penumbral waves, GALLOWAY D.J.....	49P
The fading of an extremely young T Tauri star and its associated nebula, COHEN MARTIN.....	695
STARS - BINARY	
RSGrui: a dwarf capheid in a binary system, BALONA L.A., MARTIN W.L.....	1
A study of the contact binary system ER Cephei, WORDEN S.P., COLEMAN G.D., RUCINSKI S.M., WHELAN J.A.J.....	33
The light curve at 10 μ m of Algol near secondary minimum, NADEAU D., NEUGEBAUER G., BECKLIN E.E., ELIAS J., ENNIS D., MATTHEWS K., SELLGREN K.....	523
The determination of the orbital parameters of WZ Sagittae, FABIAN A.C., LIN D.N.C., PAPALOIZOU J., PRINGLE J.E., WHELAN J.A.J.....	835
Tidal disruption and tidal coalescence in binary stellar systems, ALLADIN SALEH MOHAMED, PARTHASARTHY M.....	871
The binary X-ray pulsar 3U 1223-62, WHITE N.E., MASON K.O., SANFORD P.W.,.....	67P
The optical counterpart of the binary X-ray pulsar 4U 1538-52, PARKES G.E., MURDIN P.G., MASON K.O.....	73P
STARS - CHEMICAL COMPOSITION OF	
A note on the relation between metallicity and luminosity in field RRab Lyrae stars, HECK A., LAKAYE J.M.....	17
Abundances of singly-ionized elements of the iron group in the Sun, BIEMONT EMILE.....	683
STARS - CLUSTERS OF	
Study of the extremely young open cluster NGC 6530, SAGAR RAM, JOSHI U.C.....	467
The open cluster NGC 6383, EVANS T.LLOYD.....	661
Further evidence of mass loss from globular cluster stars, MALLIA E.A., PAGEL B.E.J.....	55P
STARS - MAGNETIC FIELDS IN	
Large-scale magnetic fields, g- modes and convection in stars, MOSS DAVID.....	621
STARS - PHOTOMETRY OF	
The evolutionary state of the Beta Canis Majoris variables - I. Accurate beta photometry of early B stars, SHOBBROOK R.R.....	43
STARS - ROTATION OF	
Gravitational radiation and the stability of rotating stars, PAPALOIZOU J., PRINGLE J.E.....	501
Stellar rotation on the zero age main sequence, RAJAMOHAN R.	743
STARS - SPECTROSCOPY OF	
Molecular spectra of pure S stars, WYCKOFF S., CLEGG R.E.S..	127
Spectrum variations of the superluminous star HR 8752, LAMBERT DAVID L., LUCK R. EARLE.....	405
Absorption lines in ν Sgr identified as high-level transitions of Fe II, JOHANSSON SVENERIC.....	593

Classification spectra of Sanduleak and Stephenson emission-line stars, ALLEN DAVID A.....	601
STARS - STRUCTURE AND EVOLUTION OF	
Invalidity of the linearized theory for a complete polytrope ANTIA H.M., CHITRE S.M.....	211
Evolutionary parameters in observed horizontal and asymptotic branches, CAPUTO F., CASTELLANI V., WOOD P.L.R..	377
The evolutionary state of the Canis Majoris variables - II. The luminosity calibration and evolutionary state, SHOBBROOK R.R.....	825
Further evidence of mass loss from globular cluster stars, MALLIA E.A., PAGEL B.E.J.....	55P
STARS - VARIABLE	
RS Gruis: a dwarf cepheid in a binary system, BALONA L.A., MARTIN W.L.....	1
The radius of the dwarf cepheid ZZ Mic, BALONA L.A., MARTIN W.L.....	11
A note on the relation between metallicity and luminosity in field RRab Lyrae stars, HECK A., LAKAYE J.M.....	17
The evolutionary state of the Beta Canis Majoris variables - I. Accurate beta photometry of early B stars, SHOBBROOK R.R.....	43
The velocity ellipsoid of RR Lyrae variable stars, WOOLLEY SIR RICHARD.....	311
Spectrum variations of the superluminous star HR 8752, LAMBERT DAVID L., LUCK R. EARLE.....	405
The infrared angular diameter of η Carinae, KOORNNEEF JAN...	477
The southern dwarf nova, Z Chamaeleontis, BATESON FRANK M...	567
The fading of an extremely young T Tauri star and its associated nebula, COHEN MARTIN.....	695
The evolutionary state of the β Canis Majoris variables - II. The luminosity calibration and evolutionary state, SHOBBROOK R.R.....	825
The determination of the orbital parameters of WZ Sagittae, FABIAN A.C., LIN D.N.C., PAPALOIZOU J., PRINGLE J.E., WHELAN J.A.J.....	835
A survey for southern Scuti variable stars, MCINALLY C.J., AUSTIN R.R.D.....	885
Radio observations of symbiotic stars, WRIGHT ALAN E., ALLEN DAVID A.....	893
Hard X-ray emission from dwarf novae, WATSON M.G., SHERRINGTON M.R., JAMESON R.F.....	79P
STARS - VELOCITIES OF	
Radial-velocity variations of α Equulei and HR 6684 deduced from PDS scans, PIKE C.D.....	265
The velocity ellipsoid of RR Lyrae variable stars, WOOLLEY SIR RICHARD.....	311
A-type central stars of planetary nebulae - I. A radial-velocity study of the central stars of NGC 2346 and NGC 3132, MENDEZ ROBERTO H., NIEMELA VIRPI S., LEE PAUL....	351
Additional radial velocities of supergiants in the Small Magellanic Cloud, THACKERAY A.D.....	699

SUN

The origin of running penumbral waves, GALLOWAY D.J.....	49P
The search for solar oscillations, 1974 to 1976, BROOKES J.R., ISAAK G.R., MCLEOD C.P., VAN DER RAAY H.B., ROCA CORTES T.....	759

SUPERNOVAE AND SUPERNOVA REMNANTS

A search for X-ray line emission in the spectrum of the Cygnus Loop, STARK J.P.W., CULHANE J.L.....	509
--------------------------------------------------------------------------------------------------------	-----

ULTRAVIOLET ASTRONOMY

Observations of the Small Magellanic Cloud with the Ultraviolet Sky Survey Telescope, NANDY K., MORGAN D.H., CARNOCHAN D.J.....	631
Observations of interstellar ultraviolet extinction from the S2/68 experiment in the TD-1 satellite, NANDY K., THOMPSON G.I., CARNOCHAN D.J., WILSON R.....	733

X-RAY ASTRONOMY

The variability of MXB 1730-335, WHITE N.E., MASON K.O., CARPENTER G.F., SKINNER G.K.....	1P
Optical monitoring of X-ray burst sources, ABRAMENKO A.N., GERSHBERG R.E., PAVLENKO E.P., PROKOF'EVA V.V., LEWIN W.H.G. VAN PARADIJS J.A., HOFFMAN J.A., LI F.K.....	27P
The X-ray source Serpens X-1: Ariel V observations and discussion of models for the spectrum and time variability, COE M.J., ENGEL A.R., QUENBY J.J., CARPENTER G.F., BELL-BURNELL S.J., DAVISON P.J.N.....	355
A search for X-ray line emission in the spectrum of the Cygnus Loop, STARK J.P.W., CULHANE J.L.....	509
The optical counterpart of GX304-1, MASON K.O., MURDIN P.G., PARKES G.E., VISVANATHAN N.....	45P
X-ray sources in clusters of galaxies, MCHARDY IAN.....	783
Erratum.....	903
The Binary X-ray pulsar 3U 1223-62, WHITE N.E., MASON K.O., SANFORD P.W.....	67P
The optical counterpart of the binary X-ray pulsar 4U 1538-52, PARKES G.E., MURDIN P.G., MASON K.O.....	73P
Hard X-ray emission from dwarf novae, WATSON M.G., SHERRINGTON M.R., JAMESON R.F.....	79P

MONTHLY NOTICES: NOTICE TO AUTHORS

1 GENERAL. All papers communicated for publication in *Monthly Notices* are submitted to the scrutiny of referees. There is no page charge for publication in *Monthly Notices*. The Society holds the copyright of all papers published in its Journals.

2 PREPARATION OF PAPERS. Authors are allowed considerable latitude, but they are requested to follow the general style of recent issues of *Monthly Notices*. They should attend particularly to:

- a* the provision of a summary of not more than 200 words;
- b* the division of a paper into sections and, if necessary, sub-sections;
- c* the annotation of the typescript so as to give the printer all possible guidance in setting the paper, with special reference to ambiguous and unusual symbols, sub- and superscripts, and the placing of diagrams and tables.
- d* the provision of a title for each table and diagram.

Papers containing tabular, diagrammatic or photographic material will normally be published on microfiche but an extended summary of up to 1000 words will appear in conventional form. The Editors may also recommend that parts of some papers are published on microfiche. Papers which may be suitable for microfiche should be discussed with the Editors at an early stage in their preparation. Guidance for the preparation of microfiche papers is contained in *Monthly Notices* Volume 181 No. 1.

Three copies of each paper should be submitted. One copy should be typewritten double-spaced on one side of the paper only, leaving a one-inch margin on the left-hand side. The other two copies should be in a *weight-reduced* form such as on flimsy paper, reduced to half size or copied on both sides of the page. The first page of the typescript should contain the full postal address of the author(s) to appear on the paper and the address to which proofs are to be sent if that is different.

3 DIAGRAMS should be drawn in black ink on tracing material or smooth white board, with a line weight and lettering suitable for reduction to fit the type area of *Monthly Notices*. Drawings for reduction to $\frac{1}{3}$, $\frac{1}{2}$ or $\frac{7}{10}$ of their original size, require line weight and lettering of the following thicknesses and sizes respectively:

ABC abc

$\frac{1}{3}$

ABC abc

$\frac{1}{2}$

ABC abc

$\frac{7}{10}$

Reductions are linear, and authors are reminded that the space between parts of a diagram as well as lines and lettering, are reduced. Adequate allowance should be made for this to avoid the joining up, during blockmaking, of parts which are close together. If a diagram has to be redrawn a standard charge will usually be made for this service (at present £5.50).

Two rough copies of diagrams should be provided for the use of the Editors and Referees.

4 PHOTOGRAPHS to be reproduced as half-tone plates are acceptable only if they are essential. Glossy unmounted prints should be submitted. Copies are required for the use of the Editors and Referees.

5 ABBREVIATIONS and references should preferably follow the practice set out in *I.A.U. Trans. XII (c)* or, if not available in that volume, the *World List of Scientific Periodicals*.

6 PROOFS. Authors are liable for the cost of alterations in excess of 50p per page. It is therefore in their own, as well as the Society's interest, to seek the maximum conciseness and simplification of symbols and equations consistent with clarity. Proofs should be returned within three days of receipt.

7 SHORT COMMUNICATIONS. These should merit *urgent* publication and should not, as a rule, exceed 1500 words. Such papers will normally be published between seven and ten weeks after acceptance. The Editors may themselves undertake responsibility for correcting proofs of such papers. Twenty-five offprints will be automatically supplied to the author(s) without charge; additional offprints may be obtained at prevailing rates, provided the order for extra copies is placed when the paper is submitted.

Papers in this category will be included as part of a routine issue of *Monthly Notices*, they will be printed on tinted paper and carry a special pagination which will enable them to be bound up together at the end of each volume.

Monthly Notices

OF THE R.A.S. VOL. 184 NO.3 SEPTEMBER 1978

CONTENTS

- 601 *David A. Allen*: Classification spectra of Sanduleak and Stephenson emission-line stars
611 *B. N. G. Guthrie*: Optical properties of radio and cD galaxies
621 *David Moss*: Large-scale magnetic fields, g^- modes and convection in stars
631 *K. Nandy, D. H. Morgan and D. J. Carnochan*: Observations of the Small Magellanic Cloud with the Ultraviolet Sky Survey Telescope
643 *A. G. Doroshkevich, S. F. Shandarin and E. Saar*: Spatial structure of protoclusters and formation of galaxies
661 *T. Lloyd Evans*: The open cluster NGC 6383
677 *John D. Barrow*: A cosmological limit on the possible variation of G
683 *Emile Biémont*: Abundances of singly-ionized elements of the iron group in the Sun
695 *Martin Cohen*: The fading of an extremely young T Tauri star and its associated nebula
699 *A. D. Thackeray*: Additional radial velocities of supergiants in the Small Magellanic Cloud
709 *J. Katz and D. Lynden-Bell*: The gravothermal instability in two dimensions
713 *Donald C. Morton*: The unidentified interstellar lines in zeta Ophiuchi
721 *V. Canuto*: On the origin of Hawking mini black-holes and the cold early Universe
727 *P. G. Johnson*: Extensive nebulosity and the giant radio loops
733 *K. Nandy, G. I. Thompson, D. J. Carnochan and R. Wilson*: Observations of interstellar ultraviolet extinction from the S2/68 experiment in the TD-1 satellite
743 *R. Rajamohan*: Stellar rotation on the zero age main sequence
755 *Alexander I. Ershkovich*: The comet tail magnetic field: large or small?
759 *J. R. Brookes, G. R. Isaak, C. P. McLeod, H. B. van der Raay and T. Roca Cortes*: The search for solar oscillations, 1974 to 1976
769 *J. M. Riley and G. G. Pooley*: 15-GHz observations of the quasars 3C 270.1 and 3C 275.1
773 *A. Boksenberg, R. F. Carswell, Malcolm G. Smith and J. A. J. Whelan*: The absorption-line spectrum of Q 1246-057
783 *Ian McHardy*: X-ray sources in clusters of galaxies
801 *Martin Cohen and Robert R. Lewis*: Optical studies of embedded infrared sources
807 *P. B. Jones*: Particle acceleration at the magnetic poles of a neutron star
825 *R. R. Shobbrook*: The evolutionary state of the β Canis Majoris variables - II. The luminosity calibration and evolutionary state
835 *A. C. Fabian, D. N. C. Lin, J. Papaloizou, J. E. Pringle and J. A. J. Whelan*: The determination of the orbital parameters of WZ Sagittae
843 *Ralph Baierlein*: The amplification of magnetic fields during the radiation era
871 *Saleh Mohamed Alladin and M. Parthasarathy*: Tidal disruption and tidal coalescence in binary stellar systems
885 *C. J. McInally and R. R. D. Austin*: A survey for southern δ Scuti variable stars
893 *Alan E. Wright and David A. Allen*: Radio observations of symbiotic stars
903 *Erratum*

Short Communications

- 55P *E. A. Mallia and B. E. J. Pagel*: Further evidence of mass loss from globular cluster stars
61P *M. J. Rees*: The M87 jet: internal shocks in a plasma beam?
67P *N. E. White, K. O. Mason and P. W. Sanford*: The binary X-ray pulsar 3U 1223-62
73P *G. E. Parkes, P. G. Murdin and K. O. Mason*: The optical counterpart of the binary X-ray pulsar 4U 1538-52
79P *M. G. Watson, M. R. Sherrington and R. F. Jameson*: 'Hard X-ray emission from dwarf novae